

REMARKS

After entry of this Amendment, Claims 11-15 and 18-22 remain pending in the application with Claim 11 being independent. Claim 18 has been canceled. Claims 11, 20, and 21 been amended in accordance with the description as set forth at paragraph [0022]. Claim 22 is new and is in accordance with the description as set forth at paragraph [0022]. Accordingly, no new matter has been introduced. Reconsideration of the application as amended is requested.

Rejection under 35 U.S.C. § 112, second paragraph:

In the Office Action dated April 23, 2010, the Examiner rejected Claims 1-15 and 18-21 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have amended Claim 11 for clarity and canceled Claim 18, so the rejection under § 112 is moot.

Rejection under 35 U.S.C. § 102(b)

The Examiner rejected Claims 11-14 under 35 U.S.C. § 102(b), as being anticipated by Stephens et al (US 2,889,163). To the extent this rejection may be deemed applicable to the amended claims, the rejection is traversed and reconsideration requested.

Claim 11 is directed to a seal element comprising a metal body having an external surface, a static seal portion of elastomer affixed to the external surface, a dynamic seal portion at a second surface of the metal body different from the external surface, a supplemental seal lip at a third surface of the metal body different from the external surface and in working relation to the dynamic seal portion, and a covering of 5-20% acrylic polymer, 0-10% PTFE, and 65-95% water on an exterior perimeter of the static seal portion capable of hardening under an increase in temperature.

The seal element can be placed in a receptacle and under operational conditions, when the environmental temperature increases, the covering will harden, resulting in a connection between the static seal portion and the receptacle. The composition and arrangement of elements, including the static seal portion of elastomer with a covering of 5-20% acrylic polymer, 0-10% PTFE, and 65-95% water, increases essential staying power so that movement of the seal element out of its assigned receptacle is avoided.

Stephens et. al. does not disclose, teach, or suggest the seal element of Claim 1. The seal of Stephens does not include a static seal portion of elastomer on a metal body. The

shell (13) of Stephens, which the Examiner refers to as a static seal portion, is formed of metal, such as steel (Col. 3, lines 4-10), unlike the present invention wherein the static seal portion is formed of elastomer. Stephens does not disclose, teach, or suggest a static seal portion of elastomer disposed on an external surface of a metal body. The coating (27) of Stephens is on metal, unlike the present invention where the covering is on elastomer.

Rejections under 35 U.S.C. § 103

The Examiner rejected Claims 11-14 and 21 under 35 U.S.C. § 103(a), as being unpatentable over Hans (DE 2918787) in view of Stephens and further in view of Sugino (JP2155980); rejected Claim 15 under 35 U.S.C. § 103(a), as being unpatentable over Hans, Stephens, and Sugino as applied to claims above, and further in view of Hoshino et al (US 3,695,044); rejected Claims 11-14 and 18-20 under 35 U.S.C. § 103(a), as being unpatentable over Hans (DE 2626484) in view of Hans (DE 2918787), in view of Stephens, rejected Claims 11-14 and 18-21 under 35 U.S.C. § 103(a), as being unpatentable over Hans (DE 2626484) in view of Hans (DE 2918787), in view of Stephens, and further in view of Sugino; and rejected Claim 15 under 35 U.S.C. § 103(a), as being unpatentable over Hans (DE 2626484), Hans (DE 2918787), Stephens, and Sugino. To the extent this rejection may be deemed applicable to the amended claims, the rejection is traversed and reconsideration requested.

None of the prior art references disclose, teach, or suggest, alone or in combination, the seal element of amended Claim 1. Hans (DE 2918787) does not disclose, teach, or suggest a supplemental seal lip at a surface of the metal body different from the external surface and in working relation to the dynamic seal portion. In addition, Hans (DE 2918787) does not disclose, teach, or suggest a covering of 5-20% acrylic polymer, 0-10% PTFE, and 65-95% water on a static seal portion of elastomer. Further, one of skill in the art would not be motivated by Stephens to use such a covering in the seal of Hans (DE 2918787). The coating of Stephens is disposed on a metal casing, not on an elastomer. Thus, one of skill in the art would not be motivated by Stephens to use a covering of 5-20% acrylic polymer, 0-10% PTFE, and 65-95% water on a static seal portion of elastomer. None of the other prior art references cited disclose, teach or suggest using a covering of 5-20% acrylic polymer, 0-10% PTFE, and 65-95% water on a static seal element of elastomer in the seal element of Claim 1.

Appl. No.: 10/578,987

Reply to Office action of April 23, 2010

It is believed that this application now is in condition for allowance. Further and favorable action is respectfully requested. If the Examiner believes that prosecution of the application can be expedited by way of an Examiner's Amendment, the Examiner is invited to contact the Applicant's attorney at the telephone number or email address listed below.

The Patent Office is authorized to charge or refund any fee deficiency or excess to Deposit Account No. 04-1061.

Respectfully submitted,

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Date

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